

CLAIM AMENDMENTS

Claims 1-4. (cancelled)

5. (previously amended) A method of assembling an optical module comprising the steps of:
mounting a plurality of surface light receiving type or surface light emitting type optical elements on one surface of a substrate with a predetermined pitch;

carrying out a passive alignment between the plurality of optical elements and first ends of a plurality of optical fibers exposed at a first surface of an optical fiber array by image recognition thereof, the optical fiber array having the plurality of optical fibers buried therein substantially in parallel with one another so that second ends of the plurality of optical fibers are exposed at a second surface of the optical fiber array that is opposite to the first surface and opposed to the plurality of optical emitting elements; and

mounting the optical fiber array at the second surface thereof to the substrate with at least one spacer interposed between the substrate and the optical fiber array while alignment between the optical elements and the optical fibers is kept.

6. (previously amended) The method as set forth in claim 5, wherein the passive alignment by image recognition is carried out on the basis of image information on the surface of the substrate on which the optical elements and the spacer have been mounted as well as image information on the first surface of the optical fiber array.

7. (previously amended) The method as set forth in claim 5, wherein the optical array is fixed at the second surface thereof to the spacer mounted on the substrate while the alignment between the optical elements and the first ends of the optical fibers is being kept.

Claims 8-11. (canceled)

12. (previously amended) A method of assembling an optical module comprising the steps of:

mounting a plurality of surface light receiving type or surface light emitting type optical elements with a predetermined pitch therebetween on one surface of a substrate;

passively aligning centers of the optical elements with centers of respective first ends of a plurality of optical fibers exposed at a first surface of an optical fiber array, wherein the optical fibers are buried in the optical fiber array substantially in parallel with one another with the same predetermined pitch therebetween as that of the optical elements mounted on the substrate such that second ends of the optical fibers are exposed at a second surface of the optical fiber array that is opposite to the first surface, said passive alignment carried out by image recognition of an image of the optical elements mounted on the one surface of the substrate and an image of the first ends of the optical fibers so that the second ends of the optical fibers are respectively opposed to the optical elements; and

mounting the optical fiber array to the substrate with at least one spacer interposed between the substrate and the optical fiber array such that a predetermined gap is provided between the respective optical elements and the second ends of the respective optical fibers while the alignment between the optical elements and the optical fibers is being kept.

13. (previously amended) The method as set forth in claim 12, wherein the passive aligning by image recognition is carried out on the basis of image information on the one surface of the substrate on which the optical element and the spacer are mounted as well as image information on the first surface of the optical fiber array.

14. (previously added) The method as set forth in claim 12 further comprising the step of providing engagement means for coupling the optical fiber array with an optical connector to said optical fiber array.

15. (previously added) The method as set forth in claim 5 further comprising the step of providing engagement means for coupling the optical fiber array with an optical connector to said optical fiber array.